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A BAIRD'S SANDPIPER *CALIDRIS BAIRDII* AT EYRE: A NEW SPECIES FOR WESTERN AUSTRALIA

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On March 7, 1979, I was driving west along the narrow sandy ocean beach between Eyre and Twilight Cove (W.A.) during a wader survey from Eyre Bird Observatory. The weather was calm, warm and sunny. While stopped in order to watch a small group of Red-eapped Dotterels *Charadrius ruficapillus* my eye was caught by the rear aspect of a small wader which was standing in front of a small pile of seaweed. An unusually patterned scaly brown back failed to suggest any of the small waders common in Australia. As I watched, the bird turned its head to show a brown face and a black bill which was too long and slender to belong to a Red-necked Stint *Calidris ruficollis*, but otherwise not long enough, or the wrong shape, for other regular species of *Calidris*. Suddenly, it turned and ran rapidly



Fig. 1.—Two views of Baird's Sandpiper, drawn from sketches and notes made in the field at Eyre on March 7, 1979. Note long, slender profile, slender black bill and legs, densely streaked breast band, white throat, head pattern like Pectoral Sandpiper, scaly upperparts, pale wing-bars on closed wing and relative lengths of tertials, tail and primary points. In flight note wing pattern and dark rump and tail.

a few metres down the beach, giving a clear view of itself from a range of about 30 metres. It was obviously a stint-sized sandpiper, but one which showed an extraordinary combination of features and made my alarm bells ring.

It was of comparable size to a Red-capped Dotterel but of entirely different structure, standing marginally shorter whilst being quite the most slender-bodied, long-winged small wader that I had ever seen. This, when combined with the main features of plumage—strikingly brown upperparts (completely lacking in grey, blackish or reddish tones), brown breast, white belly, brown head, white supercilium, slender bill and short black legs—failed to suggest anything familiar. Whilst the habitat and my first impressions of its actions were suggestive of a Sanderling *C. alba*, this bird's long and low profile, extremely long wing points, bill shape and plumage features were obviously quite wrong for that species in any plumage. Scrutiny of the black feet revealed web-free toe junctions and an obvious hind toe. Rapidly it all made sense, in that I could only be watching a Baird's Sandpiper *Calidris bairdii*.

Over the following two hours I was able to watch the sandpiper for about 90 minutes, at ranges down to within 20 metres and under ideal viewing conditions. At various times single immature Sanderling and Red-necked Stints also present approached within a metre of the Baird's, providing excellent direct comparisons which confirmed and emphasized my earlier impressions. Detailed notes and sketches were made with the bird in view. More careful pencil drawings were made on return to Eyre Observatory before any reference was made to the literature.

The following description is a summary of my field notes, and direct quotes are indicated. At the time of the observations, I was aware that the species' known status in Australia was limited to perhaps two records from the south-east.

HABITAT AND BEHAVIOUR

The sandpiper spent all of its time on the light coloured sand, mainly around and just below the high tide mark. It was very actively seeking prey around the small piles of tide-wrack, and ran into the water's edge on one occasion only, when I approached deliberately to see if the bird would show its vital flight pattern.

The gait was Sanderling-like rather than stint-like, running in swift bursts, but otherwise walking regularly and somewhat mechanically. Feeding strategy was essentially by single and multiple pecks, at first appearing erratic in direction (often delivered sideways) but actually aimed carefully at rapidly-moving invertebrates caught in mid-air or on the surface of the sand. It did not probe either under the sand or in the tide during the period of observation, but it did probe into small piles of seaweed, where it disturbed small hopping crustacea and insects which were pursued and caught with great agility.

On the beach the sandpiper made only one challenge with another wader, a Sanderling which approached very closely as it fed. Interestingly, the Sanderling gave way, despite its greater height and bulk, in response to a very brief, low, threat posture given by the Baird's.

When in flight, it joined a closely knit flock of other small waders, displaying flight actions unremarkable for a small *Calidris*.

No call was heard from it at any time, though of waders present only the calls of the Sanderling were clearly audible above the noise of the sea.

SIZE AND SHAPE

Intermediate in height between Red-necked Stint (R-nS) and Sanderling; girth of body just greater than R-nS and considerably less than Sanderling. Legs slightly longer than R-nS and shorter than those of Sanderling. Bill longer than R-nS, about same as Sanderling, "about four-fifths length of head, all black, slightly expanded at base, otherwise narrow and tapering, upper mandible virtually straight (but) decurved at tip, lower mandible very slightly curving towards base. Obviously too long and

slender for either *ruficollis* or *minuta*, not long enough for *mauri*, *alpina* or *ferruginea*. Legs about length of body depth (i.e. short in comparison to overall length), with well-developed white 'shorts' below body. Hind toe obvious, no trace of webbing between the toes when walking away along line of vision. Legs and toes all black."

Neck rather short; stance nearly horizontal, though rear half closer to the ground. Body "spindle-shaped" and elegantly tapering towards the tail. "Extreme attenuation of flight feathers made overall length about $\frac{1}{2}$ " longer than Sanderling." Tip of tail fell well short of the primary tips on the closed wing.

In flight "strikingly spindle-shaped slim body, very long sharply pointed wings and comparatively long tail."

PLUMAGE

"Astoundingly brown plumage, completely lacking pale grey tones, very obvious when against Sanderling and even R-nS, which were grey and grey-brown respectively."

"Facial pattern like Pectoral Sandpiper, being brown with fine darker streaking. Off-white supercilium from bill-base to ear coverts." Spring-plumaged Sanderlings have a less distinct supercilium. "Brown cheeks, strongly streaked crown, nape and upper back (dark striations in 'lines'). White throat obvious on front view. Whole of breast evenly brown streaked on a buff base, very like Pectoral's breast pattern. Brown-streaked breast ended abruptly on lower breast/abdomen. A median encroachment of white belly feathering extending upwards into centre of breast markings, giving a hint of central division to them. Belly and undertail coverts all white."

"Scapulars and wing feathering unlike any other *Calidris* I've seen. Essentially brown with off-white edges, producing scaly effect. No dark median streaks evident on any of the scapulars, wing coverts or tertials, thus feathering unlike a stint's. Median and greater (secondary) coverts all tipped with off white, producing effect of two nearly vertical pale bars on the rear half of the closed wing. Tertials very long, plain grey-brown." On the closed wing the tertials extended to a point marginally short of the tail point (see sketches). "Primary points dark and very slender. No hint of any chestnut feathering in upperparts."

In flight "wings dark above, with narrow off-white wing-bar across base of secondaries and showing along bases of at least most of the primaries, perhaps falling short of the outermost couple. Rump and tail very dark" (thus eliminating the possibility of *fuscicollis*, the White-rumped Sandpiper, which is considered the species closest to *bairdii*, though larger and greyer). Tail tip very dark. "Small off-white patches on sides of rump, relatively smaller in extent than on Pectoral S. (*C. melanotos*)." A second view of the flight pattern added "paler mid-wing" evident on the upperwing and also "underwing: dusky markings towards axillaries, darker under primaries than R-nS."

Overall the evenness of the light brown upperparts failed to suggest that the bird was in fresh plumage. A rather featureless paler patch noted on the mid-wing coverts, both on the ground and in flight, may have been indicative of old, abraded feathering.

The sandpiper was not seen again, despite searches on subsequent dates. Regular survey of the beach by John Martindale during March and April suggested a high flux of waders, mainly Red-necked Stints and Sanderlings, through the Nullarbor coast at this season.

There appear to be only three previous records of Baird's Sandpipers in Australia, each concerning single birds: the first at Lauderdale, Tasmania (a specimen obtained on October 24, 1965: see Milledge, 1968); another at Lake William, Victoria, on November 15, 1974 (Smith & Swindley, 1975); and more recently a third record, made at Botany Bay, New South Wales (Cook & Waugh, 1978).

Generally regarded as one of the Nearctic species of *Calidris*, *bairdii* has a known breeding range through Arctic North America west to the Chukotskiy Peninsula in N.E. Siberia. There is no known wintering area in the Palaearctic or Oriental regions, so the Siberian birds must be presumed to migrate across the Bering Sea to winter in South America, as does the bulk of the Nearectic population. If birds found in Australia are of an easterly origin, then there may be an undiscovered passage of some Siberian birds through eastern Asia. Alternative westerly origins for Australian birds are more awe-inspiring, with vagrants arriving through Europe and southern Asia or otherwise by the southern oceans from South America. Even this last course might not be impossible for a long-winged wader which crosses the north Atlantic to western Europe nowadays with annual regularity (Smith *et al.*, 1972-77).

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THE DISTRIBUTION OF *THEBA PISANA* ON ROTTNEST ISLAND

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The Mediterranean snail, *Theba pisana* (Müller), was introduced on Rottnest Island between 1925 and 1927, in the vicinity of the Settlement. Surveys in 1936, 1947 and 1958 (Serventy, 1949; Serventy and Storr, 1959) documented the expansion of this colony, and the establishment of three isolated colonies at the lighthouse, Cape Vlaming, and Stark Bay. We report here the results of a fourth survey, made in June, September, and December, 1978.

PRESENT DISTRIBUTION

The present distribution of *Theba* on the island is compared with that in 1958 on the accompanying map, and the areas occupied by each colony are shown in Table 1. In the eastern zone, there has been virtually no extension north of Lake Bagdad or south of Government House Lake. The western edge of Point Clune is now occupied, but this is not a recent extension, as G. M. Storr found colonies there in November, 1959 (personal communication). Between the lakes, there has been some westward expansion, and the eastern colonies are now connected with those expanding from the lighthouse. The area south of Gun Hill has many dead shells, but no extant colonies, indicating colonisation and subsequent extinction. An isolated colony at The Bluff is presumably a relict of that expansion.

TABLE 1.—AREAS (IN HECTARES) OCCUPIED BY *THEBA PISANA* ON ROTTNEST ISLAND AT TIMES OF SURVEYS. DATA PRIOR TO 1978 ARE FROM SERVENTY AND STORR (1959).

	1936	1947	1958	1978
Eastern Zone	69	231	358	484
Lighthouse	—	4	59	152
Cape Vlaming	—	6	51	24 (+5)*
Stark Bay	—	—	4	22

* Colony at Marjorie Bay in parentheses.